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URACHUS, BY WILLIAM L. REID, M.D.



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ON THE DIAGNOSIS AND TREATMENT OF A CASE OF PATENT URACHUS.

BY WILLIAM L. REID, M.D., F.F.P.S.G.,

Physician for Diseases of Women, Glasgow Western Infirmary; Consulting Physician to the
Maternity Hospital.

THE following case is published, partly because of the difficulty of diagnosis, and partly because of the difference of opinion in regard to the proper method of treatment of such cases. On the surface, it looks as if the treatment should be simple enough, when the diagnosis has once been made.

What follows in inverted commas is copied from the Ward Journal at the Western Infirmary, as written by Dr. James D. Cochran, the then House Physician. The rest is my own remarks and opinions on the symptoms and progress of the case.

“ Mrs. M., *aet.* 25. Admitted November 12, 1897. Married three and a half years ago, and since then has had three children. Twins at full time and normally, a year after marriage; and the third child in July last, about full time and normally. Since the birth of the twins patient has complained of pain in the right ovarian region, which the doctor thought due to an enlarged ovary, and for which patient had electricity used and a few blisters, without any good result. In April of this year pain began in the region of the umbilicus, and a fortnight afterwards swelling showed itself and pus was discharged; and this has continued with occasional intervals of a week or so until now. No leucorrhœa; menstruation and defecation normal.

“A very fine probe passes through some granulation tissue in the depression of the umbilicus downwards and backwards for three inches, that being the whole length of the probe; a No. 4 sound cannot be made to enter the sinus.

“P. V. cervix is high, split on the left side, eroded, but not ectropic. There is no evidence of a pelvic cellulitis, but the sound, passed easily to three inches, showed that the fundus, not quite fixed, was yet greatly restricted in its movements.”

The above note is, I think, defective, inasmuch as it fails to state that the sound passed towards the right side as well as downwards and backwards; and this gave countenance to the belief expressed by one of the surgeons to the hospital, as well as by two or three other medical men who examined the case, that it was one of abscess in the region of the right ovary, and in which pus had found its way to the surface in this unusual locality.

It was decided to examine the patient under chloroform.

“November 24th. To-day, under chloroform, Dr. Reid passed a long thin probe into the sinus opening at the umbilicus, and this, passing quite easily downwards along the abdominal wall, finally appeared externally at the urinary meatus.”

I am afraid this is not strictly true. The instrument used was what is commonly called a post-mortem probe, 10 inches long, and it passed downwards with many hitches until its eye reached the umbilicus. A peculiarity, afterwards explained, was that the probe passed backwards as well as downwards, so that, near the pubis, it was so deep that it could not be felt through the anterior abdominal wall.

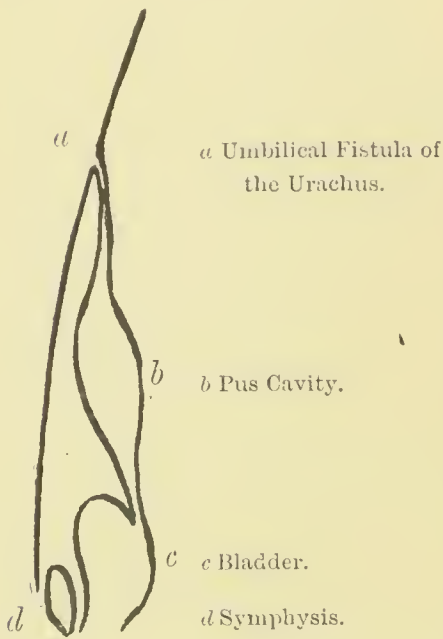
I thought it had passed into the vagina, but, on examination, I was astonished to find it projecting from the urethra. Then, for the first time, I recognized that I was dealing with a case of patent urachus.

So far as I can find, there is no case on record in which the diagnosis was made by passing a sound from the umbilicus to the urethral orifice. Dr. Freer (*Annals of Surgery*, Vol. V., St. Louis, 1887) mentions a case where the diagnosis was made

by the injection of starch into the urachus and its detection in the urine by the iodine test. In others, urea was found in the fluid obtained from the sinus.

The question now arose as to the best method of dealing with the affection. I consulted various surgical friends. One said, nothing short of cutting out a longitudinal strip of the

whole anterior abdominal wall would be safe or satisfactory. Another, that it would suffice to open the urachus from umbilicus to bladder and cause it to granulate up. The former plan, I thought, would lead to considerable risk of septic peritonitis; the latter would leave a very weak abdominal wall, as the sinus was deep, and so lead to a great after-risk of hernia. It was decided to try cutting off the communication with the bladder and drainage of the abscess cavity.



“December 2nd. After some trouble, and of course under chloroform, the probe was passed to near the bladder and was cut down upon about two inches above the pubis. Before reaching the probe, a layer of apparently inflammatory tissue like wax-cloth was cut through and below this a vascular membrane like the mucous membrane of the bladder. This bled freely and gave trouble. It was evident that a cyst had been entered, the cavity being one inch broad and one inch and a half long. Below this, the probe was found in a narrow channel, and in the attempt to reach it through the anterior abdominal wall, the bladder was opened, and it was afterwards found that the urachus ran into the bladder behind, instead of at the summit. About one inch of the lower part of the urachus was destroyed by the actual cautery. The bladder was closed by a catgut suture. A bit of iodoform gauze was carried from the wound to the umbilical opening

by means of a silk thread in a surgical probe and the rest of the wound closed with catgut sutures, the upper pair of which were left untied, to admit of drainage.

“The cyst of the urachus was not dissected out because it would have involved opening the peritoneal cavity; and in the presence of pus and urine this was considered dangerous.”

This is a fair report of the operation. I did not expect to open into the general cavity of the bladder before reaching the lower part of the urachus, having the idea that it would enter at the very highest part of the organ. The part of the urachus near the bladder seemed to have nothing behind it but peritoneum, so that it could not have been dissected out without opening the peritoneal cavity. In the Journal the fact is not mentioned that the urachus near the bladder was most carefully sutured with a fine needle and catgut.

“December 4th. Since the operation the patient has done very well. The urine has been drawn off by catheter every two hours. For the first day it contained blood and a large amount of pus, but within the last twenty-four hours it has become quite clear and entirely free from pus and blood.

“The temperature, after the operation, rose to 99.6° , but has not exceeded this; and, to-day, has fallen to normal. The wound is dressed to-day and no appearance of inflammation is observed. The patient feels very comfortable. The catheter is now to be used only every four hours.

“December 7th. To-day the case is again dressed, and the two uppermost sutures tied after withdrawal of the drain of iodoform gauze, in the place of which a thread of silk is left. The temperature has been normal since last note, and the wound shows no appearance of inflammatory action. The urine, since the 5th, has been passed voluntarily, without discomfort or difficulty, and remains clear, without pus or blood.

“December 14th. To-day the stitches are removed, and the silk thread passed from the upper part of the wound to the umbilicus withdrawn, causing slight bleeding from the latter, but not bringing with it any pus. Patient is to be allowed up to-night. She feels very well in every respect.

In particular she has no pain in the right ovarian region. The urine gives her no trouble.

“December 16th. To-day the wound is again looked at. There is a slight appearance of moisture at the umbilicus, which may be either perspiration or a slight serous discharge.”

The slight discharge just mentioned was not seen again, and four days afterwards the patient was discharged, and, when heard of last (July 25th, 1899), had continued quite well.

There seems no reasonable doubt but that the patent condition of the urachus existed in this woman from her birth. What brought it into prominence? May it not have been over-distension of the abdominal wall by the carriage of twins to the full time? It will be noted that in the first part of the Journal note it is stated that, since the birth of the twins, she had complained of pain in the right side, which was considered to be ovarian, and treated by electricity and blisters: and it was in this connection that she was admitted to one of my beds.

As regards the operation, the question with me was, whether the bladder could be shut off and the sinus destroyed without opening the abdominal cavity. Of two cases mentioned by Freer, one was met in making an abdominal section, and, although the point of exit from the bladder was carefully sutured with catgut, the patient died of peritonitis in a few days. The other also died of peritonitis, although the peritoneum had not been opened, but simply a flesh flap formed to cover the orifice of the urachus.

In the present case the wound was completely healed and the patient free from any symptom of disease fourteen days after the operation, and the cure has been permanent.

